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Robert D. Shedd Thomson Licensing LLC PO Box 5312 PRINCETON, NJ 08543-5312			EXAMINER SHIN, KYUNG H	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/553,533

**Applicant(s)**

GALLOU ET AL.

**Examiner**

Kyung Hye Shin

**Art Unit**

2443

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 October 2005.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-16 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 10/17/05 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-893)  
4) ☐ Interview Summary (PTO-413)  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_  
Paper No(s)/Mail Date 10/17/05.

### DETAILED ACTION

1. This application was filed on **10-17-2005**. Claims **1 - 16** are pending. Claims **1, 9, 10, 14** are independent.

### *Specification*

2. The specification is objected to as failing to provide *proper antecedent basis* for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The term "safety duration" used in claim 11 is not defined at all in the description, so that the meaning of the term in the claim is not ascertainable by reference to the specification.

### *Claim Rejections - 35 USC § 101*

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims **15, 16** are subject to 35 USC 101 because the claimed invention is directed toward non-statutory subject matter.

Claims **15, 16** disclose a computer program product comprises program code instructions that are construed as *software per se*, which do not define any structural and functional interrelationships, thus, it is non-statutory functional descriptive material, which does not fall within an enumerated statutory category. (See MPEP § 2106.01 I.)

The specification on page 4 also discloses that the computer program product may consist of a *signal* such as an electrical or optical signal.

Specification Page 4:

A further object of the invention is a computer program product comprising program code instructions for executing the steps of the data requesting process or the data transmitting process according to the invention, when that program is executed on a computer. By "**computer program product**", it is meant a computer program support, which **may consist** not only in a storing space containing the program, such as a diskette or a cassette, but also in a **signal**, such as an electrical or optical signal.

The inclusion of a computer program product within a signal such as an electrical or optical signal is directed toward non-statutory subject matter. Appropriate correction required.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims **1 - 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chen et al.** (US Patent No. **5,822,524**) in view of **Forecast et al.** (US Patent No. **6,230,200**).

**Regarding Claim 1**, Chen discloses data requesting device through at least one first communication network from at least one data server, comprising:

sending means for sending requests of determined data to the server via at least one second communication network, (Chen col 5, ll 59-67: send a command packet

(specific request) for retrieval of requested data; col 5, ll 39-44: control channel serves to exchange control messages; data channel serves to transmit multimedia data from the server to client; data channel (first) and control channel (second) communications channels (networks); specification (page 3) defines communications network as bi-directional communications network)

receiving means for receiving streamed data from the server via the first communication network and for providing the data to processing means for them to be exploited, (Chen col 5, ll 48-59: data receiver receives incoming data packets from the network; data receiver signals buffer manager to place data packets into the packet buffer; output processor delivers data to multimedia application) and

control means for producing pause control signals, intended for pausing data streaming from the server, and for triggering the sending of the pause control signals to the server via the second network through the sending means, (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 47-49: client agent sends NORMAL-TO-PAUSE command if amount increase above high water mark)

wherein the data requesting device comprises for generating normal state signals, intended to the server via the second network normal operation at the data requesting device, (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 49-51: client agent sends PAUSE-TO-NORMAL command if amount of data decreases from above the high water mark)

Chen does not explicitly disclose maintenance means by triggering periodic transmission of the state signals. However, Forecast discloses wherein maintenance means by triggering periodic transmission of the state signals to the server through the sending means for testifying operation. (Forecast col 52, ll 37-46: stream server sends the heartbeat (periodic transmission); heartbeat includes: an indication of current position in the stream, the state of the stream (e.g. pause, playing, completed), and a failure type code (alarm) indicating any failure; col 52, ll 52-58: if there has not been a failure to receive stream server heartbeat (periodic transmission); then execution continues)

It would have been obvious to one of ordinary skill in the art to modify Chen for maintenance means by triggering periodic transmission of the state signals as taught by Forecast. One of ordinary skill in the art would have been motivated to employ the teachings of Forecast in order for throughput to be used efficiently and most of the throughput can be used for transmitting data to network clients. (Forecast col 25, ll 3-7: “ ... *An advantage of the method used in FIG. 17 is that the throughput is used efficiently. Very little of the throughput is used for maintaining the sliding window in RAM, so that most of the throughput can be used for transmitting data from the sliding window to network clients. ...*”)

**Regarding Claim 2**, Chen discloses data requesting device according to claim 1, wherein the control means are intended to produce also resume control signals, intended for resuming data streaming from the server after pausing, and the sending

means are intended to transmit to the server via the second network the resume control signals. (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 49-51: client agent sends PAUSE-TO-NORMAL command if amount of data decreases from above the high water mark; resume normal data flow)

**Regarding Claim 3**, Chen discloses data requesting device according to claim 1, wherein the data requesting device comprises a user interface (Chen col 1, ll 43-48: interactive access; user operates his client machine to request multimedia files from the server; col 4, l 65 - col 5, l 8: user types his commands on client machine; client machine has three interacting processes: client agent which interfaces network interface and multimedia application), enabling a user to trigger the control means and the sending means, so as to cause the control signals to be provided to the server via the second network. (Chen col 5, ll 36-40: uses two logical connections; control channel serves to exchange control messages)

**Regarding Claim 4**, Chen discloses data requesting device according to claim 1, wherein the received data being stored in a central memory before being exploited (Chen col 5, ll 56-59: output processor delivers data to multimedia application; packet buffer stores data packets until multimedia application requests delivery), the data requesting device comprises regulation means, intended to trigger the control means (to produce a pause control signal when the data in the central memory exceed a predetermined high threshold level of the central memory. (Chen col 6, ll 9-15: three

transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 47-49: client agent sends NORMAL-TO-PAUSE command if amount increase (exceeds) above high water mark)

**Regarding Claim 5**, Chen discloses data requesting device according to claim 4, wherein the regulation means are intended to trigger the control means to produce a resume control signal when the streaming has been paused by the regulation means and the data in the central memory decrease down to a predetermined low threshold level of the central memory. (Chen col 6, ll 49-51: client agent sends RESUME command decrease from above to below high water mark (threshold level))

**Regarding Claim 6**, Chen discloses data requesting device according to claim 4, wherein at least one of the threshold levels of the central memory depends on a round-trip time between the data requesting device and the server. (Chen col 4, ll 4-17: constant number of frames are played in a second; uses timing information to ensure transmission of a video frame in a frame time; col 4, ll 33-44: times the transmission of multimedia files according to a fixed rate; frame rate during normal transmission; if data in buffer if client agent is below a selected standard watermark, threshold), the transmission rate is increased; if above selected standard it is decreased)

**Regarding Claim 7**, Chen discloses data requesting device according to claim 1, wherein: the receiving means are intended to receive special warning messages from the server via the first network when the server has not received the normal state



signals in due time, and the maintenance means are intended to trigger the sending of a normal state signal to the server via the second network as soon as the special warning message is received. (Chen col 6, ll 1-6: buffer manager manages the structure of data in packet buffer; should have enough data to minimize possibility of not having request data and have enough free space to receive new packets)

**Regarding Claim 8**, Chen discloses decoder, wherein it comprises a data requesting device according to claim 1. (Chen col 4, l 65 - col 5, l 8: PC (requesting device); user wishes to retrieve multimedia files from a server via data connections over a computer network; col 5, ll 59-67: send a command packet (specific request) for retrieval of requested data; col 5, ll 39-44: control channel serves to exchange control messages; data channel serves to transmit multimedia data from the server to client)

**Regarding Claim 9**, Chen discloses data requesting process through at least one first communication network from at least one data server, comprising the following steps:

    sending requests of determined data to the server via at least one second communication network, (Chen col 5, ll 59-67: send a command packet (specific request) for retrieval of requested data; col 5, ll 39-44: control channel serves to exchange control messages; data channel serves to transmit multimedia data from the server to client; data channel (first) and control channel (second) communications channels (networks))

receiving streamed data from the server via the first communication network for them to be exploited, (Chen col 5, ll 48-59: data receiver receives incoming data packets from the network; data receiver signals buffer manager to place data packets into the packet buffer; output processor delivers data to multimedia application; data channel (first) and control channel (second) communications channels (networks)) and

producing and sending to the server via the second network, pause control signals, intended for pausing data streaming from the server, (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 47-49: client agent sends NORMAL-TO-PAUSE command if amount increase above high water mark)

wherein the data requesting process comprises generating and transmitting to the server via the second network, normal state signals, intended to the server for normal operation at the data requesting device. (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 49-51: client agent sends PAUSE-TO-NORMAL command if amount of data decreases from above the high watermark; resume normal data flow)

Chen does not explicitly disclose generating and periodically transmitting state signals, intended for testifying normal operation. However, Forecast discloses wherein generating and periodically transmitting state signals, intended for testifying normal operation. (Forecast col 52, ll 37-46: stream server sends the heartbeat (periodically transmitting); heartbeat includes: an indication of current position in the stream, the state of the stream (e.g. pause, playing (normal operation), completed),

and a failure type code indicating any failure; col 52, ll 52-58: if there has not been a failure to receive stream server heartbeat (periodic transmission); then execution continues)

It would have been obvious to one of ordinary skill in the art to modify Chen for generating and periodically transmitting state signals, intended for testifying normal operation as taught by Forecast. One of ordinary skill in the art would have been motivated to employ the teachings of Forecast in order for throughput to be used efficiently and most of the throughput can be used for transmitting data to network clients. (Forecast col 25, ll 3-7)

**Regarding Claim 10**, Chen discloses data transmitting device via at least one first communication network comprising:

receiving means for receiving requests of determined data from at least one data requesting device via at least one second communication network, (Chen col 5, ll 59-67: send a command packet (specific request) for retrieval of requested data; col 5, ll 39-44: control channel serves to exchange control messages; data channel serves to transmit multimedia data from the server to client; data channel (first) and control channel (second) communications channels (networks)) and

streaming means for triggering streaming of the data to the data requesting device via the first network, (Chen col 5, ll 48-59: data receiver receives incoming data packets from the network; data receiver signals buffer manager to place data packets into the packet buffer; output processor delivers data to multimedia

application; data channel (first) and control channel (second) communications channels (networks))

the receiving means being intended to receive from the data requesting device pause control messages, the streaming means being intended to pause the data streaming when the pause control messages are received, (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 47-49: client agent sends NORMAL-TO-PAUSE command if amount increase above high water mark) and

wherein: the receiving means are intended to receive periodically normal state signals from the data requesting device (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 49-51: client agent sends PAUSE-TO-NORMAL command if amount of data decreases from above the high water mark; resume normal data flow), and

the data requesting device comprises means intended to trigger the normal state signals, the data transmitting device being preferably provided for a data requesting device according to any of claim 1. (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 49-51: client agent sends PAUSE-TO-NORMAL command if amount of data decreases from above the high watermark; resume normal data flow)

Chen does not explicitly disclose alarm means intended to trigger an alarm state when the state signals are not received in due time. However, Forecast discloses wherein alarm means intended to trigger an alarm state when the state signals are not received in due time. (Forecast col 52, ll 37-46: controller to receive a heartbeat

from each stream server within a certain time period (must be received in due time); stream server sends the heartbeat (periodic transmission); heartbeat includes: an indication of current position in the stream, the state of the stream (e.g. pause, playing, completed), and a failure type code (alarm) indicating any failure; col 52, ll 52-58: if there has not been a failure; then execution continues; if there has been a failure then log the error and initiate stream server recovery (alarm state))

It would have been obvious to one of ordinary skill in the art to modify Chen for alarm means intended to trigger an alarm state when the state signals are not received in due time as taught by Forecast. One of ordinary skill in the art would have been motivated to employ the teachings of Forecast in order for throughput to be used efficiently and most of the throughput can be used for transmitting data to network clients. (Forecast col 25, ll 3-7)

**Regarding Claim 11**, Chen discloses data transmitting device according to claim 10, wherein the normal state signal is received and depending on a round-trip time between the data requesting device and the data transmitting device. (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 49-51: client agent sends PAUSE-TO-NORMAL command if amount of data decreases from above the high watermark; resume normal data flow; col 4, ll 33-44: times the transmission of multimedia files according to a fixed rate; frame rate during normal transmission;)

Chen does not explicitly disclose an alarm means intended to trigger the alarm state when any of the state signals is not received after a safety duration following an

expected periodic time for receiving the state signal and the safety duration. However, Forecast discloses wherein alarm means are intended to trigger the alarm state when any of the state signal is not received after a safety duration following an expected periodic time for receiving the state signal and the safety duration. (Forecast col 52, ll 40-46: stream server sends the heartbeat (periodic transmission); heartbeat includes: the state of the stream (e.g. pause, playing, completed), and a failure type code; col 52, ll 52-56: initiate stream server recovery; col 53, l 65 - col 54, l 20: client may specify a parameter which defines how to perform failover; (FAILOVER\_SIGNALCLIENT: client will be signaled (warning message)) to request if failover should occur; col 55, l 64 - col 56, l 8: controller send a message (warning message) to client; master controller checks whether or not a time limit has been exceeded for a response from the client; if not alarm state; safety duration is defined for this Office Action as time period waiting for response from client after message sent to client)

It would have been obvious to one of ordinary skill in the art to modify Chen for the alarm state when any of the state signals is not received after a safety duration following an expected periodic time for receiving the state signal and the safety duration as taught by Forecast. One of ordinary skill in the art would have been motivated to employ the teachings of Forecast in order for throughput to be used efficiently and most of the throughput can be used for transmitting data to network clients. (Forecast col 25, ll 3-7)

**Regarding Claim 12**, Chen discloses data transmitting device according to claim 10, wherein the normal state signals received and data transmitting device comprises

transfer means intended to send the messages to the data requesting device via the first network. (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 49-51: client agent sends PAUSE-TO-NORMAL command if amount of data decreases from above the high water mark; resume normal data flow)

Chen does not explicitly disclose alarm means to produce a warning message when any of the state signals is not received in due time. However, Forecast disclose wherein the alarm means are intended to produce a warning message when any of the state signals is not received in due time, a transfer means intended to send the warning message, and the alarm means are intended to trigger the alarm state only when a complementary duration has elapsed after the sending of the warning message. (Forecast col 52, ll 40-46: stream server sends the heartbeat (periodic transmission); heartbeat includes: the state of the stream (e.g. pause, playing, completed), and a failure type code; col 52, ll 52-56: initiate stream server recovery; col 53, l 65 - col 54, l 20: client may specify a parameter which defines how to perform failover; (FAILOVER\_SIGNALCLIENT: client will be signaled (warning message)) to request if failover should occur; col 55, l 64 - col 56, l 8: controller send a message (warning message) to client; master controller checks whether or not a time limit has been exceeded for a response from the client; if not alarm state)

It would have been obvious to one of ordinary skill in the art to modify Chen for alarm means to produce a warning message when any of the state signals is not received in due time as taught by Forecast. One of ordinary skill in the art would have been motivated to employ the teachings of Forecast in order for throughput to be used

efficiently and most of the throughput can be used for transmitting data to network clients. (Forecast col 25, ll 3-7)

**Regarding Claim 13**, Chen discloses data transmitting device according to claim 9, wherein the receiving means are intended to receive resume control messages from the data requesting device, and the streaming means are intended to resume the data streaming when the streaming has been paused and one of the resume control messages is received. (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 49-51: client agent sends PAUSE-TO-NORMAL command if amount of data decreases from above the high water mark; resume normal data flow)

**Regarding Claim 14**, Chen discloses data transmitting process via at least one first communication network comprising the following steps:

receiving requests of determined data from at least one data requesting device via at least one second communication network, (Chen col 5, ll 59-67: send a command packet (specific request) for retrieval of requested data; col 5, ll 39-44: control channel serves to exchange control messages; data channel serves to transmit multimedia data from the server to client; data channel (first) and control channel (second) communications channels (networks))

streaming the data to the data requesting device via the first network, (Chen col 5, ll 48-59: data receiver receives incoming data packets from the network; data receiver signals buffer manager to place data packets into the packet buffer; output



processor delivers data to multimedia application; data channel (first) and control channel (second) communications channels (networks)) and

receiving from the data requesting device pause control messages, and pausing the data streaming when the pause control messages are received, (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 47-49: client agent sends NORMAL-TO-PAUSE command if amount increase above high water mark)

wherein it comprises also the following steps:

receiving periodically normal state signals from the data requesting device, (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 49-51: client agent sends PAUSE-TO-NORMAL command if amount of data decreases from above the high water mark; resume normal data flow) and

triggering the normal state signals, the data transmitting process being preferably intended to be executed by a data transmitting device compliant with claim 10. (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 49-51: client agent sends PAUSE-TO-NORMAL command if amount of data decreases from above the high water mark)

Chen does not explicitly disclose triggering an alarm state when the state signal is not received in due time. However, Forecast discloses wherein triggering an alarm state when the state signal is not received in due time. (Forecast col 52, ll 37-46: execution branches to step 534 if controller fails to receive a heartbeat from each stream servers within a certain timeout period (state signal or heartbeat not received

in due time); stream server sends the heartbeat (periodic transmission); heartbeat includes: the state of the stream (e.g. pause, playing, completed), and a failure type code indicating any failure; col 52, ll 52-59: branches to step 534: log the error and initiate stream server recovery state (alarm state))

It would have been obvious to one of ordinary skill in the art to modify Chen for triggering an alarm state when the state signal is not received in due time as taught by Forecast. One of ordinary skill in the art would have been motivated to employ the teachings of Forecast in order for throughput to be used efficiently and most of the throughput can be used for transmitting data to network clients. (Forecast col 25, ll 3-7)

**Regarding Claim 15**, Chen discloses computer program product, wherein it comprises program code instructions for executing the steps of the processes of claim 9 when the program is executed on a computer. (Chen col 3, ll 43-45: method implemented by installing software on client machine and server)

**Regarding Claim 16**, Chen discloses computer program product, wherein it comprises program code instructions for executing the steps of the process of claim 14 when the program is executed on a computer. (Chen col 3, ll 43-45: method implemented by installing software on client machine and server)

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kyung Hye Shin whose telephone number is (571) 272-3920. The examiner can normally be reached on 9:30 am - 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tonia L. Dollinger can be reached on (571) 272-4170. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kyung Hye Shin  
Examiner  
Art Unit 2443

January 20, 2009

/Kyung Hye Shin/  
Examiner, Art Unit 2443